

secting the front-rear direction or that the vehicle is going to rotate around the vertical axis passing through the central portion of the vehicle body.

[0010] In the vehicle according to one aspect of the present disclosure, the steering device may be configured to rotate each of the wheels around a rotational central axis to the first steering angle or the second steering angle. The detection unit may be configured to detect that the wheels are steered to the first steering angle or the second steering angle, based on rotation angles of the wheels rotated around the rotational central axis.

[0011] The vehicle according to one aspect of the present disclosure may further include a manipulation unit that is manipulated by a driver to output a signal ordering the steering device to steer the wheels to the first steering angle or the second steering angle. The detection unit may be configured to detect that the steering device steers the wheels to the first steering angle or the second steering angle, based on the manipulation unit having been manipulated and output the signal.

[0012] The vehicle according to one aspect of the present disclosure may further include a wheelhouse that covers at least the upper side of the wheel. The wheelhouse may be configured such that when the steering device steers the wheel to the first steering angle or the second steering angle, the wheel partially protrudes from the wheelhouse to the outside of the vehicle body. The detection unit may be configured to detect that the steering device steers the wheel to the first steering angle or the second steering angle, based on the wheel having partially protruded from the wheelhouse to the outside of the vehicle body.

[0013] In the vehicle according to one aspect of the present disclosure, the indication unit may include a light emitter that emits visible light to the wheels when the detection unit has detected that the steering device steers the wheels to the first steering angle or the second steering angle.

[0014] In the vehicle according to one aspect of the present disclosure, the indication unit may include blinkers that are provided on right and left sides of the vehicle body and configured to flash when the vehicle is going to travel in a direction different from that when the vehicle travels straight forward. The indication unit may be configured to control the blinkers such that an aspect of flashing of the blinkers when the vehicle is going to turn in an arcuate line around a center of turning that is set outside the vehicle body, and an aspect of flashing of the blinkers when the vehicle is going to travel straight in a direction intersecting the front-rear direction or when the vehicle is going to rotate around the vertical axis passing through the central portion of the vehicle body, are different from each other.

[0015] In the vehicle according to one aspect of the present disclosure, the blinkers may be sequential blinkers in each of which a plurality of flashing parts is arranged in a straight line or a curved line and the flashing parts flash in predetermined order. The aspect of flashing of the blinkers may include the order of flashing of the flashing parts.

[0016] In the vehicle according to one aspect of the present disclosure, the indication unit may include a display part that displays, on an outer surface of the vehicle body, a text or an image representing a direction in which the vehicle is going to travel as a result of the steering device having steered the wheels to the first steering angle or the second steering angle.

[0017] When the vehicle according to the present disclosure is going to behave differently from when only the front wheels or the rear wheels are steered, such as when the vehicle is going to travel in a lateral direction, travel straight in an oblique direction, or rotate on the spot, the direction indication system can let those around the vehicle know about such a special behavior or travel. Thus, this vehicle allows the drivers of other vehicles or pedestrians nearby to predict the direction of travel of the vehicle, and can ultimately contribute to smooth and safe operation of vehicles on the road.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0018] Features, advantages, and technical and industrial significance of exemplary embodiments of the disclosure will be described below with reference to the accompanying drawings, in which like numerals denote like elements, and wherein:

[0019] FIG. 1 is a schematic view of a vehicle in an embodiment of the present disclosure;

[0020] FIG. 2 is a schematic view showing a driving unit and a steering device for one wheel;

[0021] FIG. 3 is a skeleton diagram showing an example of the mechanism inside the steering device;

[0022] FIG. 4 is a view showing an example of the arrangement of LEDs in sequential blinkers;

[0023] FIG. 5 is a view showing a state of steering of each wheel when the vehicle travels laterally;

[0024] FIG. 6 is a view showing a state of steering of each wheel when the vehicle rotates on the spot;

[0025] FIG. 7 is a view showing a state of steering of each wheel when the vehicle travels obliquely; and

[0026] FIG. 8 is a partial perspective view schematically showing a state of the wheel protruding from a wheelhouse.

#### DETAILED DESCRIPTION OF EMBODIMENTS

[0027] A vehicle 1 in an embodiment of the present disclosure is a vehicle capable of traveling straight in a lateral direction orthogonal to a front-rear direction thereof or in a direction intersecting with the front-rear direction at a predetermined angle, as well as of rotating without moving in the front-rear direction or the lateral direction. To achieve this, as shown in FIG. 1, the vehicle 1 includes steering devices 4 that can steer all wheels 3 mounted to a vehicle body 2 to an equal angle. Here, along the front-rear direction of the vehicle, a direction which a driver faces in a state of sitting on a seat (neither the driver nor the seat is shown) is a forward direction, and the opposite direction is a backward direction. Hereinafter, a travel in a direction orthogonal to the front-rear direction of the vehicle will be referred to as a "lateral travel." A straight travel in a direction intersecting the front-rear direction of the vehicle at a predetermined angle is a travel in which the vehicle travels in a straight line, i.e., such that the vehicle body 2 has a straight motion trajectory, in a direction oblique to the vehicle body 2, with the vehicle body 2 kept oriented in the front-rear direction, and this travel will be hereinafter referred to as an "oblique travel." Further, a behavior of rotating without the vehicle body 2 moving in the front-rear direction or the lateral direction is a rotation around a vertical axis (an axis perpendicular to a road surface) passing through a predetermined portion of the vehicle body 2, and this rotation will be hereinafter referred to as an "on-the-spot rotation." As